

**Problem Statement:****- Student Loan & Financial Aid**

The high cost of education can present a significant challenge for many students, making it difficult to afford tuition fees, and living expenses. As a result, many students resort to financial aid including student loans to help cover these costs. However, the process of obtaining student loans can be very complex, with various eligibility requirements that make it a troublesome process to go through.

**Financial Aid Process Includes**

1. **Verification of Eligibility:** Banks and institutions need to verify a student's eligibility based on various factors, such as income, academic performance, and enrollment status
2. **Verification and Management of Loan Disbursement:** Once a student is approved for financial aid, banks and institutions need to disburse the funds in a timely manner.
3. **Record and Data Management:** Banks and institutions need to keep accurate records of all financial aid transactions and student loan agreements.
4. **Fraud Prevention and Risk Management:** The student loan and financial aid process is vulnerable to fraud and abuse, such as identity theft or falsified information.

According to the National Center for Education statistics, during the 2019-2020 academic year, approximately 57% of all undergraduate students received some type of financial aid. The College Board reports that the average annual cost of tuition and fees at public four-year institutions for the 2021-2022 academic year was \$10,560 for in-state students and \$27,020 for out-of-state students. Moreover, according to the most recent statistics, around 43 million Americans currently have student loan debt, with a total outstanding debt of over \$1.7 trillion. Which highlights the significant role that student loans play in financing higher education today.

**Solution Offered:**

Following the stated problem, the need of authenticating the student's eligibility for a loan and proceeding with full payment is where blockchain interoperability and Oracle would take place.

Our project is an integrated finance system linking all components of the student loan process, starting from the student loan request all the way until its full payment. An integrated system to ensure the right handing of a student loan while taking care of the elements along the payment process.

The system will verify the student's income and issue a verification request to the student's university ensuring his enrollment and academic performance. Once verified and all requirements are matched, the bank would accept the student loan request.

By taking advantage of our Oracle, we will build a system that will be able to ensure true student's records retrieval that drops **Risk of Fraud** to zero and tackles **Verification of eligibility** issues.

This ensures that the system is free of any manipulation or tampering. The system will provide an accurate and non-tamperable ecosystem that will enable us to completely get rid of any student loan frauds.

Taking into consideration **Data and Loan Disbursement Management** issues once the student loan is accepted, the system takes advantage of the blockchain technology by building a series of student loan records, in addition to another blockchain for universities, based on the student records.

### **Diagrams:**

